

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An optical module, comprising:
a bench having a first region and a second region;
a light-emitting semiconductor device mounted on the second region of the bench for emitting light, the light-emitting semiconductor device having a first surface and a second surface, the light-emitting semiconductor device emitting light;
a driver electrically connected to the light-emitting device for driving the light-emitting semiconductor device and mounted on the first region of the bench, the driver having a primary top surface and a secondary bottom surface opposing opposite to the primary top surface, the bottom surface facing the bench;
a light-receiving semiconductor device for receiving light emitted from the second surface of the light-emitting semiconductor device, ~~and passed through the light passing~~ a space spreading above the secondary top surface of the driver; and
a substrate for installing the bench thereon having a first region and a second region, the light-emitting semiconductor device being mounted on the second region and the driver being mounted on the first region,
wherein a level of the first region of the bench measured from the substrate is lower than a level of the second region of the bench measured from the substrate.
2. (Currently Amended) The optical module according to claim 1, wherein the level of the second region of the bench is higher than a level of the ~~secondary top~~ secondary top surface of the driver.
3. (Currently Amended) The optical module according to claim 1, wherein a plurality of electrodes of the driver is provided in the ~~primary bottom~~ primary bottom surface of the driver and the driver is mounted on the first region of the bench by a flip-chip technique ~~so that the primary surface of the driver faces to the first region.~~

4. (Currently Amended) The optical module according to claim 3, wherein the optical module further comprises a chip carrier mounted on the ~~secondary~~ top surface of the driver, the light-receiving semiconductor device being mounted on the chip carrier.

5. (Original) The optical module according to claim 3, wherein the optical module further comprises an optical device having a light-reflecting surface, the optical device being mounted on the secondary surface of the driver, the light-receiving semiconductor device being optically coupled to the second surface of the light-emitting semiconductor device through the light-reflecting surface of the optical device.

6. (Currently Amended) The optical module according to claim 3, wherein the light-receiving semiconductor device has a light-incident surface and a light-sensitive surface, the light-incident surface being inactive to the light emitted from the light-emitting semiconductor device ~~and a light-sensitive surface, the light-incident surface~~ and facing to the second surface of the light-emitting semiconductor device and the light-sensitive surface intersecting ~~crossing~~ the light-incident surface.

7. (Currently Amended) The optical module according to claim 6, wherein the light-receiving semiconductor device is mounted on the ~~secondary~~ top surface of the driver in a configuration that the light-sensitive surface faces to the ~~secondary~~ top surface of the driver.

8. (Currently Amended) The optical module according to claim 1, further comprising an optical fiber having a tip facing to the light-emitting semiconductor device for receiving the light emitted from the first surface of the light-emitting semiconductor device.

9. (Currently Amended) The optical module according to claim 8, wherein the bench further comprises a third region ~~and a fourth region~~, the regions from the first to the third

~~fourth~~ being arranged along a predetermined direction, the third region ~~of the bench~~ having a first groove parallel to the predetermined direction for ~~setting~~ receiving the optical fiber therein.

10. (Currently Amended) The optical module according to claim 9, wherein the bench further comprises a second groove between the second region and the third region, the second groove intersecting ~~to~~ the predetermined direction and the first groove reaching the second groove, and

wherein the second groove has a side, the optical fiber being aligned to the light-emitting semiconductor device mounted in the second region of the bench by abutting the tip of the optical fiber ~~to~~ against the side of the second groove.

Claims 11 – 13. (Cancelled)

14. (New) The optical module according to claim 8, wherein the light-emitting semiconductor device, the light-receiving semiconductor device, and the tip of the optical fiber are encapsulated by a resin transparent to the light emitted from the light-emitting semiconductor device.

15. (New) The optical module according to claim 1, wherein the bench is made of an insulator.

16. (New) the optical module according to the claim 1, wherein the bench is made of silicon.